

CLAIMS

What is claimed is:

1. A computer system user interface for statistical analysis comprising:
 - 5 a data entry display screen configured to receive user input providing tabular data;
 - a configuration and control display screen configured to receive user input selecting a particular statistical analysis to be performed on the tabular data;
 - 10 statistical computation means responsive to user input received in the configuration and control display screen to perform the particular statistical analysis using the tabular data entered by user input in the data entry display screen to generate statistical results wherein the statistical computation means is operable to retrieve and reformat the tabular data without user interaction; and
 - 15 a results page display screen responsive to the statistical computation means and to user input received in the configuration and control display screen to format and display results of the statistical analysis.
2. The user interface of claim 1 wherein the statistical computation means includes:
 - 20 means for computing the particular statistical analysis as one or more of: mean of the response, median of a function response, standard deviation of a function response, 1st and 3rd quartile of a function response, stability factor of a function response, percentiles of a function response, percentile span of a function response, mean of the response using weighted data, median of the response using weighted data, standard deviation of the response using weighted data, 1st and 3rd quartile of the response using weighted data, stability factor of the response using weighted data, percentiles of the response using weighted data, percentile span of the response using weighted data, mean of the response for the top N elements, median of a function response for the

top N elements, standard deviation of a function response for the top N elements, 1st and 3rd quartile of a function response for the top N elements, stability factor of a function response for the top N elements, percentiles of a function response for the top N elements, percentile span of a function response for the top N elements, mean of the response using weighted data for the top N elements, median of the response using weighted data for the top N elements, standard deviation of the response using weighted data for the top N elements, 1st and 3rd quartile of the response using weighted data for the top N elements, stability factor of the response using weighted data for the top N elements, percentiles of the response using weighted data for the top N elements, and percentile span of the response using weighted data for the top N elements.

3. The user interface of claim 1 further comprising:
a data store associated with the data entry display screen for persistent storage of the tabular data,
wherein the statistical analysis computation means is operable to retrieve the tabular data from the data store.

4. A method comprising:
receiving user input identifying desired analysis;
retrieving user data from a data store;
reformatting the user data in accordance with the desired analysis;
computing factors for the desired analysis;
formatting output from results of the computation for presentation to the user;
and
presenting the output to the user in response to input from the user requesting output presentation,
wherein the steps of retrieving, reformatting computing and formatting are automated, responsive to the step of receiving and otherwise substantially devoid of interaction with the user for receiving input.

5. The method of claim 4 further comprising:
receiving user input to enter the user data in a tabular format in advance of the
step of receiving user input identifying desired analysis.
6. The method of claim 5 further comprising:
5 transferring the user data entered in tabular format to a database.
7. The method of claim 4 wherein the step of reformatting comprises:
retrieving the user data from the database such that the user data is in a
different format than the tabular format.
8. The method of claim 4 wherein the step of receiving comprises:
10 receiving user input identifying the desired analysis as one or more of: mean
of the response, median of a function response, standard deviation of a
function response, 1st and 3rd quartile of a function response, stability
factor of a function response, percentiles of a function response,
percentile span of a function response, mean of the response using
weighted data, median of the response using weighted data, standard
deviation of the response using weighted data, 1st and 3rd quartile of
the response using weighted data, stability factor of the response using
weighted data, percentiles of the response using weighted data,
percentile span of the response using weighted data, mean of the
15 response for the top N elements, median of a function response for the
top N elements, standard deviation of a function response for the top N
elements, 1st and 3rd quartile of a function response for the top N
elements, stability factor of a function response for the top N elements,
percentiles of a function response for the top N elements, percentile
span of a function response for the top N elements, mean of the
20 response using weighted data for the top N elements, median of the
response using weighted data for the top N elements, standard
deviation of the response using weighted data for the top N elements,
1st and 3rd quartile of the response using weighted data for the top N
elements, stability factor of the response using weighted data for the
25
25 response for the top N elements, median of a function response for the
top N elements, standard deviation of a function response for the top N
elements, 1st and 3rd quartile of a function response for the top N
elements, stability factor of a function response for the top N elements,
percentiles of a function response for the top N elements, percentile
span of a function response for the top N elements, mean of the
30 response using weighted data for the top N elements, median of the
response using weighted data for the top N elements, standard
deviation of the response using weighted data for the top N elements,
1st and 3rd quartile of the response using weighted data for the top N
elements, stability factor of the response using weighted data for the

top N elements, percentiles of the response using weighted data for the top N elements, and percentile span of the response using weighted data for the top N elements.

9. A method comprising:

- 5 presenting a spreadsheet to a user on a display wherein the spreadsheet comprises a plurality of pre-defined pages;
- receiving tabular data in a canonical form into a data page of the plurality of pre-defined pages;
- 10 receiving configuration input into a user interaction page of the plurality of pre-defined pages wherein the configuration input indicates a type of statistical analysis to be performed and indication of elements involved in the statistical analysis;
- 15 automatically reformatting the tabular data in accord with the type of statistical analysis without further user interaction;
- automatically performing the indicated statistical analysis for all indicated elements without further interaction wherein the statistical analysis identifies a significant factor in the tabular data; and
- generating results of the statistical analysis in a result page of the plurality of pre-defined pages wherein the results identify the significant factor.

20 10. The method of claim 9 wherein the step of receiving configuration information comprises:

receiving user input identifying portions of the tabular data representing elements for the statistical analysis and user input identifying portions of the tabular data representing a response for the statistical analysis.

25 11. The method of claim 10 wherein the step of receiving configuration input further comprises:

receiving user input as the configuration input identifying the type of statistical analysis as one or more of: mean of the response, median of the response, standard deviation of the response, 1st and 3rd quartile of

the response, stability factor of the response, percentiles of the response, and percentile span of the response.

12. The method of claim 9 wherein the step of generating results comprises:

5 generating results as tabular output in the results page.

13. The method of claim 9 wherein the step of generating results comprises:

generating results as graphical output in the results page

14. The method of claim 9 wherein the step of receiving configuration 10 input comprises:

receiving user input identifying relevant elements within the tabular data and a corresponding response within the tabular data.

15. The method of claim 14 wherein the step of performing the statistical analysis comprises:

15 determining a difference between the mean of a studied element of said relevant elements and all other elements of said relevant elements to determine significance of the studied element.

16. The method of claim 14 wherein the step of performing the statistical analysis comprises:

20 determining a difference between a standard deviation of a studied element of said relevant elements and all other elements of said relevant elements to determine significance of the studied element.

17. The method of claim 14 wherein the step of performing the statistical analysis comprises:

25 determining a difference between percentiles of a studied element of said relevant elements and all other elements of said relevant elements to determine significance of the studied element.

18. A computer readable storage medium tangibly embodying program instructions for a method, the method comprising:
- receiving user input identifying desired analysis;
- retrieving user data from a data store;
- 5 reformatting the user data in accordance with the desired analysis;
- computing factors for the desired analysis;
- formatting output from results of the computation for presentation to the user;
- and
- presenting the output to the user in response to input from the user requesting
- 10 output presentation,
- wherein the method steps of retrieving, reformatting computing and formatting are automated, responsive to the method step of receiving and otherwise substantially devoid of interaction with the user for receiving input.
- 15 19. The medium of claim 18 further comprising:
- receiving user input to enter the user data in a tabular format in advance of the method step of receiving user input identifying desired analysis.
20. 20. The medium of claim 19 further comprising:
- transferring the user data entered in tabular format to a database.
- 20 21. The medium of claim 20 wherein the method step of reformatting comprises:
- retrieving the user data from the database such that the user data is in a different format than the tabular format.
22. The medium of claim 18 wherein the method step of receiving
- 25 comprises:
- receiving user input identifying the desired analysis as one or more of: mean of the response, median of a function response, standard deviation of a function response, 1st and 3rd quartile of a function response, stability factor of a function response, percentiles of a function response,
- 30 percentile span of a function response, mean of the response using

weighted data, median of the response using weighted data, standard deviation of the response using weighted data, 1st and 3rd quartile of the response using weighted data, stability factor of the response using weighted data, percentiles of the response using weighted data,
5 percentile span of the response using weighted data, mean of the response for the top N elements, median of a function response for the top N elements, standard deviation of a function response for the top N elements, 1st and 3rd quartile of a function response for the top N elements, stability factor of a function response for the top N elements,
10 percentiles of a function response for the top N elements, percentile span of a function response for the top N elements, mean of the response using weighted data for the top N elements, median of the response using weighted data for the top N elements, standard deviation of the response using weighted data for the top N elements,
15 1st and 3rd quartile of the response using weighted data for the top N elements, stability factor of the response using weighted data for the top N elements, percentiles of the response using weighted data for the top N elements, and percentile span of the response using weighted data for the top N elements.
20 23. A computer readable storage medium tangibly embodying program instructions for a method, the method comprising:
presenting a spreadsheet to a user on a display wherein the spreadsheet comprises a plurality of pre-defined pages;
receiving tabular data in a canonical form into a data page of the plurality of
25 pre-defined pages;
receiving configuration input into a user interaction page of the plurality of pre-defined pages wherein the configuration input indicates a type of statistical analysis to be performed and indication of elements involved in the statistical analysis;
30 automatically reformatting the tabular data in accord with the type of statistical analysis without further user interaction;

automatically performing the indicated statistical analysis for all indicated elements without further interaction wherein the statistical analysis identifies a significant factor in the tabular data; and generating results of the statistical analysis in a result page of the plurality of pre-defined pages wherein the results identify the significant factor.

5 24. The medium of claim 23 wherein the method step of receiving configuration information comprises:

10 receiving user input identifying portions of the tabular data representing elements for the statistical analysis and user input identifying portions of the tabular data representing a response for the statistical analysis.

15 25. The medium of claim 24 wherein the method step of receiving configuration input further comprises:

15 receiving user input as the configuration input identifying the type of statistical analysis as one or more of: mean of the response, median of the response, standard deviation of the response, 1st and 3rd quartile of the response, stability factor of the response, percentiles of the response, and percentile span of the response.

20 26. The medium of claim 23 wherein the method step of generating results comprises:

20 generating results as tabular output in the results page.

25 27. The medium of claim 23 wherein the method step of generating results comprises:

 generating results as graphical output in the results page

25 28. The medium of claim 23 wherein the method step of receiving configuration input comprises:

 receiving user input identifying relevant elements within the tabular data and a corresponding response within the tabular data.

29. The medium of claim 28 wherein the method step of performing the statistical analysis comprises:

determining a difference between the mean of a studied element of said relevant elements and all other elements of said relevant elements to determine significance of the studied element.

30. The medium of claim 28 wherein the method step of performing the
5 statistical analysis comprises:

determining a difference between a standard deviation of a studied element of said relevant elements and all other elements of said relevant elements to determine significance of the studied element.

31. The medium of claim 28 wherein the method step of performing the
10 statistical analysis comprises:

determining a difference between percentiles of a studied element of said relevant elements and all other elements of said relevant elements to determine significance of the studied element.